# NTC THERMISTOR R-T CHARACTERISTICS

| TYPE | TN20-3N683J [T,B] |
|---|---|

| | | | |
|---|---|---|---|
| RESISTANCE(at25℃) | 68000 Ω | R-TOLERANCE(±) | 5 % |
| B-VALUE(25/50℃) | 3650 K | B-TOLERANCE(±) | 3 % |

| T(℃) | Rmin(Ω) | Rnom(Ω) | Rmax(Ω) |
|---|---|---|---|
| -40 | 1.513E+006 | 1.764E+006 | 2.052E+006 |
| -39 | 1.424E+006 | 1.657E+006 | 1.923E+006 |
| -38 | 1.341E+006 | 1.557E+006 | 1.804E+006 |
| -37 | 1.263E+006 | 1.464E+006 | 1.693E+006 |
| -36 | 1.191E+006 | 1.377E+006 | 1.590E+006 |
| -35 | 1.123E+006 | 1.297E+006 | 1.494E+006 |
| -34 | 1.060E+006 | 1.221E+006 | 1.404E+006 |
| -33 | 1.001E+006 | 1.151E+006 | 1.321E+006 |
| -32 | 9.452E+005 | 1.085E+006 | 1.243E+006 |
| -31 | 8.933E+005 | 1.024E+006 | 1.170E+006 |
| -30 | 8.447E+005 | 9.662E+005 | 1.102E+006 |
| -29 | 7.994E+005 | 9.127E+005 | 1.039E+006 |
| -28 | 7.569E+005 | 8.626E+005 | 9.805E+005 |
| -27 | 7.169E+005 | 8.155E+005 | 9.253E+005 |
| -26 | 6.792E+005 | 7.712E+005 | 8.735E+005 |
| -25 | 6.437E+005 | 7.296E+005 | 8.249E+005 |
| -24 | 6.103E+005 | 6.905E+005 | 7.793E+005 |
| -23 | 5.788E+005 | 6.537E+005 | 7.365E+005 |
| -22 | 5.491E+005 | 6.191E+005 | 6.963E+005 |
| -21 | 5.211E+005 | 5.865E+005 | 6.586E+005 |
| -20 | 4.947E+005 | 5.559E+005 | 6.231E+005 |
| -19 | 4.698E+005 | 5.270E+005 | 5.897E+005 |
| -18 | 4.463E+005 | 4.998E+005 | 5.583E+005 |
| -17 | 4.241E+005 | 4.741E+005 | 5.287E+005 |
| -16 | 4.031E+005 | 4.499E+005 | 5.009E+005 |
| -15 | 3.833E+005 | 4.271E+005 | 4.747E+005 |
| -14 | 3.646E+005 | 4.056E+005 | 4.501E+005 |
| -13 | 3.469E+005 | 3.853E+005 | 4.268E+005 |
| -12 | 3.302E+005 | 3.661E+005 | 4.049E+005 |
| -11 | 3.143E+005 | 3.480E+005 | 3.843E+005 |
| -10 | 2.994E+005 | 3.309E+005 | 3.648E+005 |
| -9 | 2.852E+005 | 3.147E+005 | 3.464E+005 |
| -8 | 2.717E+005 | 2.994E+005 | 3.291E+005 |
| -7 | 2.590E+005 | 2.850E+005 | 3.127E+005 |
| -6 | 2.470E+005 | 2.713E+005 | 2.973E+005 |
| -5 | 2.356E+005 | 2.584E+005 | 2.826E+005 |
| -4 | 2.247E+005 | 2.461E+005 | 2.689E+005 |
| -3 | 2.145E+005 | 2.345E+005 | 2.558E+005 |
| -2 | 2.048E+005 | 2.236E+005 | 2.435E+005 |
| -1 | 1.955E+005 | 2.132E+005 | 2.318E+005 |
| 0 | 1.868E+005 | 2.033E+005 | 2.208E+005 |

| T(℃) | Rmin(Ω) | Rnom(Ω) | Rmax(Ω) |
|---|---|---|---|
| 0 | 1.868E+005 | 2.033E+005 | 2.208E+005 |
| 1 | 1.785E+005 | 1.940E+005 | 2.104E+005 |
| 2 | 1.706E+005 | 1.852E+005 | 2.005E+005 |
| 3 | 1.631E+005 | 1.768E+005 | 1.911E+005 |
| 4 | 1.560E+005 | 1.688E+005 | 1.823E+005 |
| 5 | 1.492E+005 | 1.613E+005 | 1.739E+005 |
| 6 | 1.428E+005 | 1.541E+005 | 1.659E+005 |
| 7 | 1.366E+005 | 1.472E+005 | 1.583E+005 |
| 8 | 1.308E+005 | 1.407E+005 | 1.511E+005 |
| 9 | 1.252E+005 | 1.346E+005 | 1.443E+005 |
| 10 | 1.199E+005 | 1.287E+005 | 1.378E+005 |
| 11 | 1.149E+005 | 1.231E+005 | 1.316E+005 |
| 12 | 1.101E+005 | 1.178E+005 | 1.258E+005 |
| 13 | 1.055E+005 | 1.128E+005 | 1.202E+005 |
| 14 | 1.011E+005 | 1.079E+005 | 1.149E+005 |
| 15 | 9.696E+004 | 1.034E+005 | 1.099E+005 |
| 16 | 9.300E+004 | 9.902E+004 | 1.052E+005 |
| 17 | 8.922E+004 | 9.487E+004 | 1.006E+005 |
| 18 | 8.562E+004 | 9.093E+004 | 9.632E+004 |
| 19 | 8.218E+004 | 8.716E+004 | 9.221E+004 |
| 20 | 7.890E+004 | 8.358E+004 | 8.831E+004 |
| 21 | 7.578E+004 | 8.016E+004 | 8.459E+004 |
| 22 | 7.279E+004 | 7.690E+004 | 8.105E+004 |
| 23 | 6.993E+004 | 7.380E+004 | 7.768E+004 |
| 24 | 6.721E+004 | 7.083E+004 | 7.446E+004 |
| 25 | 6.460E+004 | 6.800E+004 | 7.140E+004 |
| 26 | 6.196E+004 | 6.530E+004 | 6.865E+004 |
| 27 | 5.944E+004 | 6.272E+004 | 6.601E+004 |
| 28 | 5.703E+004 | 6.025E+004 | 6.350E+004 |
| 29 | 5.474E+004 | 5.790E+004 | 6.109E+004 |
| 30 | 5.255E+004 | 5.565E+004 | 5.879E+004 |
| 31 | 5.046E+004 | 5.350E+004 | 5.659E+004 |
| 32 | 4.847E+004 | 5.145E+004 | 5.448E+004 |
| 33 | 4.656E+004 | 4.949E+004 | 5.246E+004 |
| 34 | 4.474E+004 | 4.761E+004 | 5.053E+004 |
| 35 | 4.301E+004 | 4.581E+004 | 4.868E+004 |
| 36 | 4.135E+004 | 4.409E+004 | 4.691E+004 |
| 37 | 3.976E+004 | 4.245E+004 | 4.521E+004 |
| 38 | 3.824E+004 | 4.087E+004 | 4.358E+004 |
| 39 | 3.679E+004 | 3.937E+004 | 4.202E+004 |
| 40 | 3.540E+004 | 3.792E+004 | 4.052E+004 |

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| TYPE | TN20-3N683J [T,B] |
|---|---|

| | | | |
|---|---|---|---|
| RESISTANCE(at25℃) | 68000 Ω | R-TOLERANCE(±) | 5 % |
| B-VALUE(25/50℃) | 3650 K | B-TOLERANCE(±) | 3 % |

| T(℃) | Rmin(Ω) | Rnom(Ω) | Rmax(Ω) |
|---|---|---|---|
| 40 | 3.540E+004 | 3.792E+004 | 4.052E+004 |
| 41 | 3.406E+004 | 3.653E+004 | 3.909E+004 |
| 42 | 3.279E+004 | 3.521E+004 | 3.771E+004 |
| 43 | 3.157E+004 | 3.393E+004 | 3.638E+004 |
| 44 | 3.040E+004 | 3.271E+004 | 3.511E+004 |
| 45 | 2.928E+004 | 3.154E+004 | 3.389E+004 |
| 46 | 2.821E+004 | 3.042E+004 | 3.272E+004 |
| 47 | 2.718E+004 | 2.934E+004 | 3.160E+004 |
| 48 | 2.620E+004 | 2.831E+004 | 3.052E+004 |
| 49 | 2.526E+004 | 2.732E+004 | 2.949E+004 |
| 50 | 2.435E+004 | 2.637E+004 | 2.849E+004 |
| 51 | 2.349E+004 | 2.547E+004 | 2.754E+004 |
| 52 | 2.266E+004 | 2.460E+004 | 2.663E+004 |
| 53 | 2.187E+004 | 2.376E+004 | 2.575E+004 |
| 54 | 2.111E+004 | 2.296E+004 | 2.490E+004 |
| 55 | 2.038E+004 | 2.218E+004 | 2.409E+004 |
| 56 | 1.967E+004 | 2.144E+004 | 2.330E+004 |
| 57 | 1.900E+004 | 2.072E+004 | 2.255E+004 |
| 58 | 1.835E+004 | 2.004E+004 | 2.182E+004 |
| 59 | 1.773E+004 | 1.937E+004 | 2.112E+004 |
| 60 | 1.713E+004 | 1.874E+004 | 2.045E+004 |
| 61 | 1.655E+004 | 1.812E+004 | 1.980E+004 |
| 62 | 1.599E+004 | 1.753E+004 | 1.917E+004 |
| 63 | 1.546E+004 | 1.696E+004 | 1.857E+004 |
| 64 | 1.495E+004 | 1.642E+004 | 1.799E+004 |
| 65 | 1.445E+004 | 1.589E+004 | 1.742E+004 |
| 66 | 1.398E+004 | 1.538E+004 | 1.688E+004 |
| 67 | 1.352E+004 | 1.489E+004 | 1.636E+004 |
| 68 | 1.308E+004 | 1.442E+004 | 1.586E+004 |
| 69 | 1.266E+004 | 1.397E+004 | 1.537E+004 |
| 70 | 1.225E+004 | 1.353E+004 | 1.491E+004 |
| 71 | 1.185E+004 | 1.311E+004 | 1.445E+004 |
| 72 | 1.148E+004 | 1.270E+004 | 1.402E+004 |
| 73 | 1.111E+004 | 1.231E+004 | 1.360E+004 |
| 74 | 1.076E+004 | 1.193E+004 | 1.319E+004 |
| 75 | 1.042E+004 | 1.156E+004 | 1.280E+004 |
| 76 | 1.009E+004 | 1.121E+004 | 1.242E+004 |
| 77 | 9.778E+003 | 1.087E+004 | 1.205E+004 |
| 78 | 9.475E+003 | 1.054E+004 | 1.170E+004 |
| 79 | 9.182E+003 | 1.023E+004 | 1.136E+004 |
| 80 | 8.901E+003 | 9.921E+003 | 1.103E+004 |

| T(℃) | Rmin(Ω) | Rnom(Ω) | Rmax(Ω) |
|---|---|---|---|
| 80 | 8.901E+003 | 9.921E+003 | 1.103E+004 |
| 81 | 8.631E+003 | 9.628E+003 | 1.071E+004 |
| 82 | 8.370E+003 | 9.345E+003 | 1.041E+004 |
| 83 | 8.118E+003 | 9.072E+003 | 1.011E+004 |
| 84 | 7.875E+003 | 8.808E+003 | 9.827E+003 |
| 85 | 7.640E+003 | 8.552E+003 | 9.550E+003 |
| 86 | 7.413E+003 | 8.305E+003 | 9.282E+003 |
| 87 | 7.193E+003 | 8.066E+003 | 9.022E+003 |
| 88 | 6.981E+003 | 7.835E+003 | 8.771E+003 |
| 89 | 6.776E+003 | 7.611E+003 | 8.527E+003 |
| 90 | 6.577E+003 | 7.394E+003 | 8.291E+003 |
| 91 | 6.385E+003 | 7.183E+003 | 8.062E+003 |
| 92 | 6.198E+003 | 6.979E+003 | 7.839E+003 |
| 93 | 6.018E+003 | 6.782E+003 | 7.624E+003 |
| 94 | 5.844E+003 | 6.591E+003 | 7.415E+003 |
| 95 | 5.676E+003 | 6.407E+003 | 7.214E+003 |
| 96 | 5.513E+003 | 6.228E+003 | 7.018E+003 |
| 97 | 5.356E+003 | 6.055E+003 | 6.829E+003 |
| 98 | 5.203E+003 | 5.888E+003 | 6.645E+003 |
| 99 | 5.056E+003 | 5.726E+003 | 6.467E+003 |
| 100 | 4.914E+003 | 5.569E+003 | 6.295E+003 |
| 101 | 4.776E+003 | 5.417E+003 | 6.128E+003 |
| 102 | 4.642E+003 | 5.269E+003 | 5.966E+003 |
| 103 | 4.513E+003 | 5.127E+003 | 5.809E+003 |
| 104 | 4.388E+003 | 4.989E+003 | 5.657E+003 |
| 105 | 4.267E+003 | 4.855E+003 | 5.509E+003 |
| 106 | 4.150E+003 | 4.725E+003 | 5.366E+003 |
| 107 | 4.036E+003 | 4.599E+003 | 5.227E+003 |
| 108 | 3.926E+003 | 4.477E+003 | 5.092E+003 |
| 109 | 3.820E+003 | 4.359E+003 | 4.962E+003 |
| 110 | 3.717E+003 | 4.244E+003 | 4.835E+003 |
| 111 | 3.617E+003 | 4.133E+003 | 4.712E+003 |
| 112 | 3.520E+003 | 4.026E+003 | 4.592E+003 |
| 113 | 3.426E+003 | 3.921E+003 | 4.476E+003 |
| 114 | 3.335E+003 | 3.820E+003 | 4.364E+003 |
| 115 | 3.247E+003 | 3.721E+003 | 4.255E+003 |
| 116 | 3.161E+003 | 3.626E+003 | 4.148E+003 |
| 117 | 3.078E+003 | 3.533E+003 | 4.045E+003 |
| 118 | 2.998E+003 | 3.443E+003 | 3.945E+003 |
| 119 | 2.919E+003 | 3.356E+003 | 3.848E+003 |
| 120 | 2.844E+003 | 3.271E+003 | 3.753E+003 |
| 121 | 2.770E+003 | 3.189E+003 | 3.662E+003 |
| 122 | 2.699E+003 | 3.109E+003 | 3.572E+003 |
| 123 | 2.630E+003 | 3.031E+003 | 3.486E+003 |
| 124 | 2.563E+003 | 2.956E+003 | 3.402E+003 |
| 125 | 2.497E+003 | 2.883E+003 | 3.320E+003 |